Amendments to the Claims

Please amend the claims as shown below.

1-4.   (Canceled).

5.   (Currently Amended) ~~The computer implemented method of claim 1, wherein determining a first threshold and a second threshold of each of the processing units further comprises:~~ A computer implemented method of assigning objects to a plurality of processing units, each of the objects having an object size and an object load, the method comprising:

a) for each of the processing units, setting a storage capacity threshold and a load capacity threshold to initial values according to actual storage capacity and load capacity of the respective processing units;

b) calculating an index value of each object based on the object's size and the object's load;

c) sorting the objects by their index values to provide a sequence of objects;

d) selecting at least one processing units to assign objects to, for each selected processing unit,

assigning as many of the objects to the processing unit as fit within the storage capacity threshold and the load capacity threshold of the respective processing unit, the objects being assigned in sequence, and

removing the assigned object(s) from the sequence;

e) revising the storage capacity threshold and load capacity threshold to new values based on a total number of the processing units to which objects are assigned and unused capacity of the selected processing units; comprising:

[[d)]] determining a first largest gap between the aggregated size of objects being assigned to one of the selected processing units and the actual storage capacity of the processing unit,

[[e)]] determining a second largest gap between the aggregated load of objects being assigned to one of the selected processing units and the actual load capacity of the processing unit,

[[f)]] subtracting from the initial value of the storage capacity the first largest gap divided by the total number of selected processing units from the storage capacity to provide ~~the first~~ a revised storage capacity threshold, and

[[g)]] subtracting from the initial value of the load capacity the second largest gap divided by the total number of selected processing units from the load capacity to provide the second a revised load capacity threshold[[.]];

f) performing step d) again using the revised storage capacity threshold and the revised load capacity threshold.

6.   (Currently Amended) ~~The computer implemented method of claim 1, further comprises:~~ A computer implemented method of assigning objects to a plurality of processing units, each of the objects having an object size and an object load, the method comprising:

a) for each of the processing units, setting a storage capacity threshold and a load capacity threshold to initial values according to actual storage capacity and load capacity of the respective processing units;

b) calculating an index value of each object based on the object's size and the object's load;

c) sorting the objects by their index values to provide a sequence of objects;

d) selecting at least one processing units to assign objects to, for each selected processing unit,

  assigning as many of the objects to the processing unit as fit within the storage capacity threshold and the load capacity threshold of the respective processing unit, the objects being assigned in sequence, and

  removing the assigned object(s) from the sequence;

[[d)]] e) determining a total of the sizes of the objects,

[[e)]] f) determining a total of the loads of the objects,

[[f)]] g) determining a first difference between the total of the storage capacities of the processing units and the total of the sizes of the objects,

[[g)]] h) determining a second difference between the total of the load capacities of the processing units and the total of the load of the objects,

[[h)]] i) subtracting the first difference divided by the number of processing units from the initial value of the storage capacity to provide a first revised storage capacity threshold,

[[i)]] j) subtracting the second difference divided by the number of processing units from the initial value of the load capacity to provide a second revised load capacity threshold,

[[j)]] k) performing step 1 c) d) again, wherein the remaining storage capacity is determined by the difference between the aggregated size of the objects being assigned to the processing unit and the first revised storage capacity threshold, and the remaining load capacity is determined by the difference between the aggregated load of the objects being assigned to the processing unit and the second revised load capacity threshold,

[[k)]] l) if as a result of step 6 j) k) there is an excess amount of memory requirement for one of the selected processing units that surpasses the first revised storage capacity threshold, dividing the excess amount by the number of selected processing units and increasing the first revised storage capacity threshold by the result of the division, and

[[l)]] m) if as result of step 6 j) k) there is an excess load requirement for one of the processing units that surpasses the second revised load capacity threshold, dividing the excess load by the number of processing units and increasing the second revised load capacity threshold by the result of the division,

wherein steps 6 j), 6 k) and 6 l) k), l) and m) are performed repeatedly until there is no such excess amount of memory requirement and no such excess load requirement.

7.   (Currently Amended) The computer implemented method of claim 1, further comprising: A computer implemented method of assigning objects to a plurality of processing units, each of the objects having an object size and an object load, the method comprising:

a) for each of the processing units, setting a storage capacity threshold and a load capacity threshold to initial values according to actual storage capacity and load capacity of the respective processing units;

b) calculating an index value of each object based on the object's size and the object's load;

c) sorting the objects by their index values to provide a sequence of objects;

d) selecting at least one processing units to assign objects to, for each selected processing unit,

assigning as many of the objects to the processing unit as fit within the storage capacity threshold and the load capacity threshold of the respective processing unit, the objects being assigned in sequence, and

removing the assigned object(s) from the sequence;

[[d)]]e) stepwise varying the ~~first~~ storage and ~~second thresholds~~ load threshold between the respective ~~first~~ initial values and second limits,

[[e)]]f) performing ~~step 1 c)~~ d) for each ~~first~~ storage and ~~second~~ load threshold value, wherein the remaining storage capacity is the difference between the aggregated size of the objects being assigned to the processing unit and the ~~first~~ storage threshold, the remaining load capacity is the difference between the aggregated load of the objects being assigned to the processing unit and the ~~second~~ load threshold, and a statistical measure is calculated for the assignment of objects to the processing unit, and

[[f)]]g) selecting one of the assignments of objects to processing units based on the statistical measure.

8.   (Currently Amended) The computer implemented method of claim 7, wherein:

the ~~first~~ second limit of the ~~first~~ storage threshold is given by the aggregated size of the objects divided by the number of selected processing units,

~~the second limit of the first threshold is given by the storage capacity,~~

the ~~first~~ second limit of the ~~second~~ load threshold is given by the aggregated load of the objects divided by the number of selected processing units~~, and the second limit of the second threshold is given by the load capacity~~.

9.   (Previously Presented) The computer implemented method of claim 7, wherein the statistical measure is calculated by calculation of a standard deviation or a variance of the totals of the indices of objects assigned to one processing unit.

10-11. (Cancelled)

12.   (Currently Amended) The computer implemented method of claim [[1]]5, wherein the index value of an object is calculated based on the sum of the normalized object size and normalized object load and based on the absolute value of a difference between the normalized object size and the normalized object load.

13-14. (Cancelled).

15.   (Currently Amended) ~~The article of manufacture of claim 13, further comprising~~
~~instructions to perform:~~ An article of manufacture, comprising a machine readable medium
having instructions for assigning objects to a plurality of processing units, each of the objects
having an object size and an object load, the instructions comprising:

        a) for each of the processing units, setting a storage capacity threshold and a load
capacity threshold to initial values according to actual storage capacity and load capacity of the
respective processing units;

        b) calculating an index value of each object based on the object's size and the object's
load;

        c) sorting the objects by their index values to provide a sequence of objects;

        d) selecting at least one processing units to assign objects to, for each selected
processing unit,

                assigning as many of the objects to the processing unit as fit within the storage
        capacity threshold and the load capacity threshold of the respective processing unit, the
        objects being assigned in sequence, and

                removing the assigned object(s) from the sequence;

        e) revising the storage capacity threshold and load capacity threshold to new values
based on a total number of the processing units to which objects are assigned and unused
capacity of the selected processing units; comprising:

                [[d]] determining a first largest gap between the aggregated size of objects
        being assigned to one of the selected processing units and the actual storage capacity of
        the processing unit,

                [[e]] determining a second largest gap between the aggregated load of objects
        being assigned to one of the selected processing units and the actual load capacity of
        the processing unit,

                [[f]] subtracting from the initial value of the storage capacity the first largest
        gap divided by the total number of selected processing units from the storage capacity
        to provide ~~the first~~ a revised storage capacity threshold, and

                [[g]] subtracting from the initial value of the load capacity the second largest
        gap divided by the total number of selected processing units from the load capacity to
        provide ~~the second~~ a revised load capacity threshold.

f) performing step d) again using the revised storage capacity threshold and the revised load capacity threshold.

16.   (Currently Amended) ~~The article of manufacture of claim 13, further comprising instructions to perform the steps of:~~ An article of manufacture, comprising a machine readable medium having instructions for assigning objects to a plurality of processing units, each of the objects having an object size and an object load, the instructions comprising:

a) for each of the processing units, setting a storage capacity threshold and a load capacity threshold to initial values according to actual storage capacity and load capacity of the respective processing units;

b) calculating an index value of each object based on the object's size and the object's load;

c) sorting the objects by their index values to provide a sequence of objects;

d) selecting at least one processing units to assign objects to, for each selected processing unit,

assigning as many of the objects to the processing unit as fit within the storage capacity threshold and the load capacity threshold of the respective processing unit, the objects being assigned in sequence, and

removing the assigned object(s) from the sequence;

[[d)]]e) determining a total of the sizes of the objects,

[[e)]]f) determining a total of the loads of the objects,

[[f)]]g) determining a first difference between the total of the storage capacities of the processing units and the total of the sizes of the objects,

[[g)]]h) determining a second difference between the total of the load capacities of the processing units and the total of the load of the objects,

[[h)]]i) subtracting the first difference divided by the number of processing units from the initial value of the storage capacity to provide a ~~first~~ revised storage capacity threshold,

[[i)]]j) subtracting the second difference divided by the number of processing units from the initial value of the load capacity to provide a ~~second~~ revised load capacity threshold,

[[j)]]k) performing step ~~13 c)~~ d) again, wherein the remaining storage capacity is determined by the difference between the aggregated size of the objects being assigned to the processing unit and the ~~first~~ revised storage capacity threshold, and the remaining load capacity

is determined by the difference between the aggregated load of the objects being assigned to the processing unit and the ~~second~~ revised load capacity threshold,

[[k)]]l) in case that as a result of ~~step 16 j)~~ k) there is an excess amount of memory requirement for one of the selected processing units that surpasses the revised storage capacity ~~first~~ threshold, dividing the excess amount by the minimum number of processing units and increasing the revised stroage capacity ~~first~~ threshold by the result of the division, and

[[l)]] in case that as a result of ~~step 16 j)~~ k) there is an excess load requirement for one of the processing units that surpasses the revised load capacity ~~second~~ threshold, dividing the excess load by the ~~minimum~~ number of processing units and increasing the revised load capacity ~~second~~ threshold by the result of the division,

wherein steps ~~16 j), 16 k) and 16 l)~~ k), l) and m) are performed repeatedly until there is no such excess amount of memory requirement and no such excess load requirement.

17.   (Currently Amended) ~~The article of manufacture of claim 13, further comprising instructions to perform the steps of:~~ An article of manufacture, comprising a machine readable medium having instructions for assigning objects to a plurality of processing units, each of the objects having an object size and an object load, the instructions comprising:

a) for each of the processing units, setting a storage capacity threshold and a load capacity threshold to initial values according to actual storage capacity and load capacity of the respective processing units;

b) calculating an index value of each object based on the object's size and the object's load;

c) sorting the objects by their index values to provide a sequence of objects;

d) selecting at least one processing units to assign objects to, for each selected processing unit,

assigning as many of the objects to the processing unit as fit within the storage capacity threshold and the load capacity threshold of the respective processing unit, the objects being assigned in sequence, and

removing the assigned object(s) from the sequence;

[[d)]]e) stepwise varying the ~~first~~ storage and ~~second~~ load thresholds between the respective ~~first~~ initial values and second limits,

[[e]] performing step 13 e) d) for each first storage and second load threshold value, wherein the remaining storage capacity is the difference between the aggregated size of the objects being assigned to the processing unit and the first storage threshold, the remaining load capacity is the difference between the aggregated load of the objects being assigned to the processing unit and the second load threshold, and a statistical measure is calculated for the assignment of objects to the processing unit, and

[[f]]g) selecting one of the assignments of objects to processing units based on the statistical measure.

18. (Currently Amended) The article of manufacture of claim [[13]]15, further comprising instructions to calculate the index value of an object on the basis of the sum of the normalized object size and normalized object load and on the basis of the absolute value of the difference of normalized object size and normalized object load.

19-21. (Canceled).

22. (Currently Amended) The blade server of claim 21, comprising the balancing instructions to perform: A blade server comprising executable instructions, which when executed cause a processor associated with the blade server to execute a method for dynamically assigning objects to a plurality of blade servers, each one of the objects having an assigned index that is based on object size and object load, the method comprising:

a) for each of the processing units, setting a storage capacity threshold and a load capacity threshold to initial values according to actual storage capacity and load capacity of the respective processing units;

b) calculating an index value of each object based on the object's size and the object's load;

c) sorting the objects by their index values to provide a sequence of objects;

d) selecting at least one processing units to assign objects to, for each selected processing unit,

assigning as many of the objects to the processing unit as fit within the storage capacity threshold and the load capacity threshold of the respective processing unit, the objects being assigned in sequence, and

removing the assigned object(s) from the sequence;

e) revising the storage capacity threshold and load capacity threshold to new values based on a total number of the processing units to which objects are assigned and unused capacity of the selected processing units; comprising:

[[d)]] determining a first largest gap between the aggregated size of objects being assigned to one of the selected processing units and the actual storage capacity of the processing unit,

[[e)]] determining a second largest gap between the aggregated load of objects being assigned to one of the selected processing units and the actual load capacity of the processing unit,

[[f)]] subtracting from the initial value of the storage capacity the first largest gap divided by the total number of selected processing units from the storage capacity to provide the first a revised storage capacity threshold, and

[[g)]] subtracting from the initial value of the load capacity the second largest gap divided by the total number of selected processing units from the load capacity to provide the second a revised load capacity threshold[[.]];

f) performing step d) again using the revised storage capacity threshold and the revised load capacity threshold.

23.   (Cancelled)

Please add the new claims as follows:

24.   (New) The computer implemented method of claim 5, wherein the index values of the objects and the object sequence are saved and reused for each iteration of assigning operation.

25.   (New) The computer implemented method of claim 6, wherein the index value of an object is calculated based on the sum of the normalized object size and normalized object load and based on the absolute value of a difference between the normalized object size and the normalized object load.

26.   (New) The computer implemented method of claim 6, wherein the index values of the objects and the object sequence are saved and reused for each iteration of assigning operation.

27.   (New) The computer implemented method of claim 7, wherein the index value of an object is calculated based on the sum of the normalized object size and normalized object load and based on the absolute value of a difference between the normalized object size and the normalized object load.

28.   (New) The computer implemented method of claim 7, wherein the index values of the objects and the object sequence are saved and reused for each iteration of assigning operation.

29.   (New) The article of manufacture of claim 15, wherein the index values of the objects and the object sequence are saved and reused for each iteration of assigning operation.

30.   (New) The article of manufacture of claim 16, further comprising instructions to calculate the index value of an object on the basis of the sum of the normalized object size and normalized object load and on the basis of the absolute value of the difference of normalized object size and normalized object load.

31.   (New) The article of manufacture of claim 16, wherein the index values and the object sequence are saved and reused for each iteration of assigning operation.

32.   (New) The article of manufacture of claim 17, wherein the index values and the object sequence are saved and reused for each iteration of assigning operation.

33.   (New) The article of manufacture of claim 17, further comprising instructions to calculate the index value of an object on the basis of the sum of the normalized object size and normalized object load and on the basis of the absolute value of the difference of normalized object size and normalized object load.

34.   (New) The article of manufacture of claim 17, wherein:
        the second limit of the storage threshold is given by the aggregated size of the objects divided by the number of selected processing units,
        the second limit of the load threshold is given by the aggregated load of the objects divided by the number of selected processing units.

35.   (New) The article of manufacture of claim 17, wherein the statistical measure is calculated by calculation of a standard deviation or a variance of the totals of the index values of objects assigned to one processing unit.